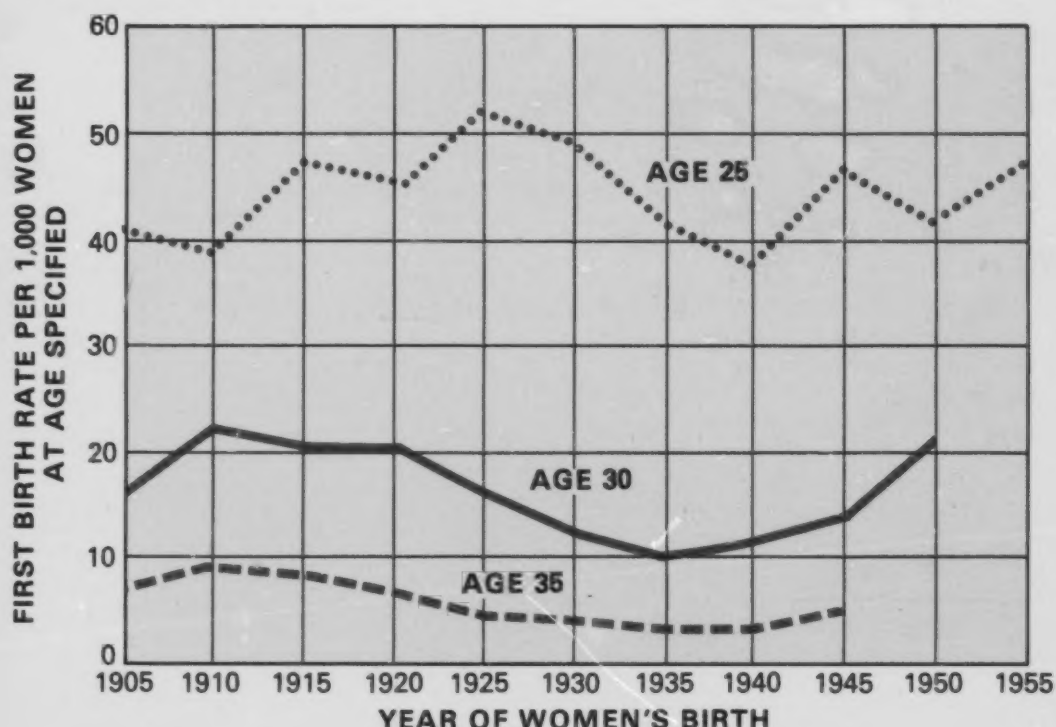


Figure 3. First Birth Rates at Ages 25, 30, and 35 of Women Born 1905-1955



Sources: See Figure 1.

tinctions can only be made by asking questions about attitudes and intentions, and such data, although useful, are not exact and are likely to change over a person's lifetime.

Researchers have only recently studied voluntarily childless couples. The results obtained so far indicate that they tend to be white, urban, employed, highly educated individuals who have married at later ages, experienced marital disruption, and moved frequently as adults.⁹ They also tend to have higher incomes than other couples.

Delayed first birth trends

Tracking long-term trends in older women's first birth rates at different ages, like trends in childlessness, also helps put current delayed childbearing in perspective. Figure 3 shows women's first birth rates at ages 25, 30, and 35 for

women born between 1905 and 1955. The first birth rates at ages 30 and 35 for women born in 1945 and 1950, who reached those ages in 1980, are higher than those for women born in the 1930s, who participated in the baby boom of 1947-1964 and experienced high first birth rates at younger ages, but similar to the first birth rates at ages 30 and 35 for women born between 1910 and 1920. The first birth rate at age 25 for women who reached that age in 1980 (born in 1955) is also higher than the rate at that age for women born in 1935 and 1940 and similar to the first birth rates at age 25 of women born 1910-1920. However, it is overshadowed by the rates of women born in 1925 and 1930, who reached age 25 in 1950 and 1955 as the baby boom was rising to a peak.

Many researchers have shown that the social and economic circumstances of a

period strongly affect fertility trends at that time. In fact, temporal effects on fertility are so marked that women at all childbearing ages respond in similar ways to the circumstances they live through.¹⁰ More and more social scientists are recognizing that the high fertility of the baby boom era was an exception to the sustained decline in American women's fertility which began as far back as 1800.¹¹ During the boom, women across the whole range of childbearing ages, from teenagers to those in their late thirties, responded to the thriving postwar economy by having babies—older women making up somewhat for the children they had put off during the depression and wartime years; younger women marrying earlier and having children sooner and closer together than their mothers had. But the experience of women born between 1910 and 1920 was also anomalous. They entered their childbearing ages during the massive and unexpected depression of the 1930s and left them with almost the lowest completed family sizes so far recorded in the U.S., despite their postwar efforts to compensate for low fertility during their younger years.¹²

What is happening now? Is the current wave of delayed childbearing only a response to contemporary conditions? Some economists indicate that it is. Chase Econometrics economist Michael Carliner observes that it is the baby boomers born in 1948 and 1949 and now in their late thirties who are the much-publicized, affluent "yuppies" or "yumpies" (young upwardly mobile professionals). Their more numerous successors are much worse off and falling steadily behind.¹³ Over 4 million babies were born each year between 1954 and 1964, compared with 3.6 million in 1948 and 1949. Because of their larger numbers, combined with recurrent recessions during the 1970s and early 1980s, the later baby boomers have faced much fiercer competition in the job market and had to accept lower pay than the oldest baby boomers. Carliner points out that in-



Today's delayed childbearing is similar to that of women born between 1910 and 1920 who postponed children during the 1930s depression and tried to catch up during the prosperous postwar era.

comes of families in the 25-34 age bracket, though most have two earners, averaged only 86 percent of the incomes of all family households in 1983, down from more than 96 percent in 1965. At the same time, housing costs have soared. George Sternlieb, director of the Rutgers Center for Urban Policy Research, notes that in 1984, houses cost twice as much and mortgage interest rates are 40 percent higher than they were when the 1948 and 1949 baby boomers reached age 30, and rentals now absorb 30 percent of family incomes, compared to 25 percent five and more years ago.¹⁴ Having to work harder and wait longer to acquire living quarters suitable for raising a family could well be a factor in the baby boom generation's delayed childbearing.

Rather than a response to the harder times people now in their twenties and early thirties have faced, is the current trend more a return to the downward trend in fertility interrupted by the baby boom and the earlier pattern of much

childbearing delayed to after age 25? It is too early to say for sure. The U.S. total fertility rate—the average number of lifetime births women would have if they experienced current age-specific fertility rates—has hovered around 1.8 births per woman since the mid-1970s, less than half the baby boom peak rate of 3.7 in 1957 and below the previous low of 2.1 reached in the mid-1930s. However, the return to relatively high first birth rates after age 25 is more recent. Certainly, if we are returning to patterns of earlier decades in the 20th century the causes will probably be quite different.¹⁵ Women now have many more life options to compete with childraising, and the contraceptive revolution has given couples much more control over the initiation of childbearing, reinforced by the availability of safe, legal abortion. Further, the widespread availability and use of sterilization removes the risk of unintended pregnancies after desired family size is reached.¹⁶

Racial patterns

Patterns of childbearing differ considerably for black and white women. Black women enter parenthood more quickly during the teenage years than white women do. However, among some cohorts born in the earlier part of the century—those of 1905-1909 and 1915-1924—more black than white women were childless at age 40. This is attributed to subfecundity, nutritional deficiencies, and unstable unions experienced by these black women, rather than intentional delay or foregoing of children.¹⁷ Today, the likelihood of becoming a mother is about equal for black and white women, but black women are much less likely to delay the onset of childbearing. Among women born between 1945 and 1949, for example, 74 percent of black women had borne at least one child by age 25, compared to 59 percent of white women (see Table 3). By age 30, the difference remained but had narrowed to 83 percent for blacks, versus 77 percent for white women.

Table 3. Percent of Black and White Women Born 1940-1954 Who Were Mothers by Age 25 and Age 30

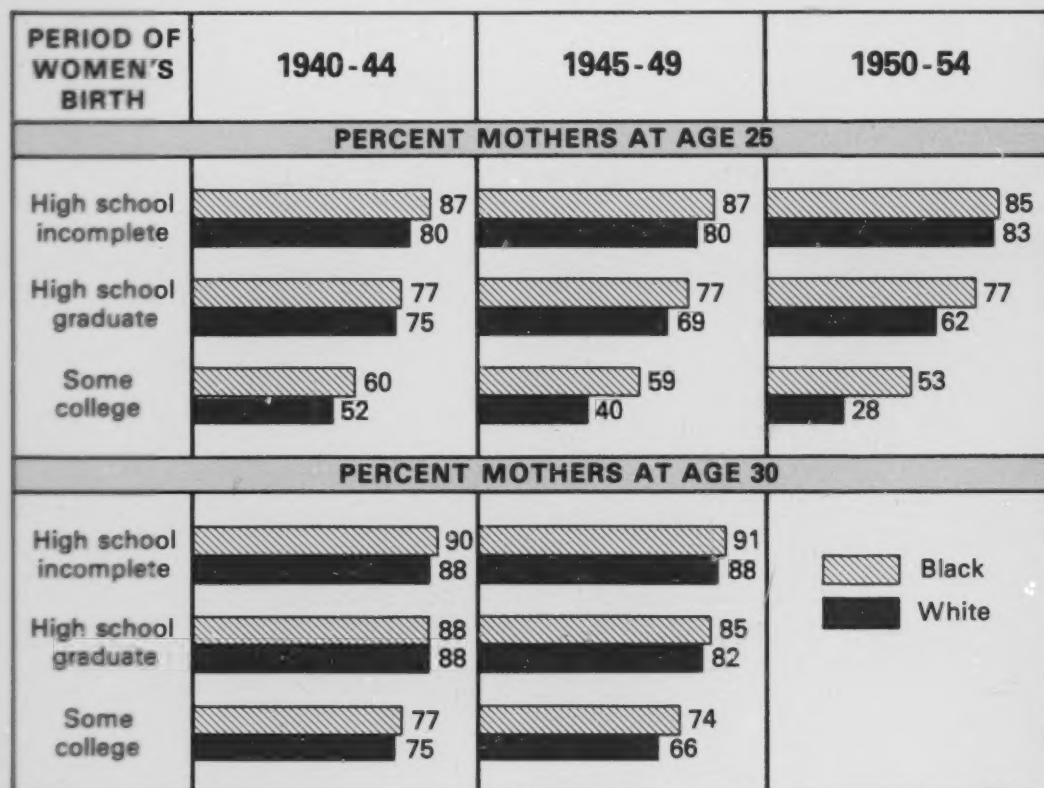
Period of women's birth	Percent mothers at 25		Percent mothers at 30	
	Black	White	Black	White
1940-45	76.5	68.2	86.1	83.5
1945-49	73.8	58.8	83.4	77.0
1950-54	71.1	51.1	—	—

Source: Carolyn C. Rogers and Martin O'Connell, "Child-spacing Among Birth Cohorts of American Women: 1905 to 1959," *Current Population Reports*, Series P-20, No. 385 (Washington, DC: Bureau of the Census, 1984) Table 1.

These differences could be distorted by black women's generally lower educational attainment, which is related both to higher fertility and less delayed childbearing. Figure 4 (page 14) shows the differences for recent cohorts within educational groups. Among women born from 1950 to 1954 who did not finish high school, the percentage of women who had become mothers by age 25 was scarcely higher for blacks (85) than for whites (83). For high school graduates in this cohort, however, the percentage for blacks (77) was about a quarter higher than for white women (62) at age 25. And among women with some college education, black women were almost twice as likely as white women to have had a child by age 25 (53 versus 28 percent). These differences within educational groups for women born between 1950 and 1954 are wider than they were for the cohorts of 1940-1944 and 1945-1949 at age 25. The narrower differences within educational groups by age 30 (shown for the two earlier cohorts) indicate that better educated white women do more catching up in their late twenties.

Sociologist Ronald Rindfuss notes that black women, especially the better educated, seem increasingly less likely than similar white women to delay motherhood, at least up to age 25, and speculates that these women may view current economic difficulties less harshly than

Figure 4. Percent of Black and White Women Born 1940-1954 Who Were Mothers by Age 25 and Age 30, by Education



Source: Table 2 of source cited on Table 3.

their white counterparts and therefore have less motivation to delay childbearing.¹⁸

Why Do Couples Delay Childbearing?

Although delayed childbearing has occurred in the past, today's trend is of particular interest not only because of the numbers involved, but also because observers suspect that American society is changing in ways that will cause more and more women to postpone childbearing, even after economic prospects have brightened for young people. Among these changes are increasing levels of education among both men and

women, but particularly women, better opportunities for women in the labor force, changing sexual and childbearing norms, and changing attitudes toward marriage and the family.

These changes are clearly related to each other and to decisions about fertility, but the exact relations are not well understood. In the past, individuals usually completed their education before they began work or married. They married before they began having children. Many women worked before they married, but retired for years or for good once they married or began childbearing. The pattern of these activities became more varied for women in particular after World War II, but to the extent that they still occur in sequence, a delay in one may

Peace activist, 34, delayed first birth to 30:

"I wanted to get a start on a career. After college I went directly to grad school and got my master's and by that point I had just been married . . . Then we moved to [current residence] when [child-psychiatrist husband] started internship at Children's Hospital. It was such a hectic schedule for him and I was in a new city with a new job. I wasn't ready to have a child."

—*The Philadelphia Inquirer*, July 22, 1984

mean a delay in the next stage.¹⁹ Thus, some of the delay in starting families may be because women are spending more years in school, starting work later, and waiting longer to establish themselves in a career before marrying and then before taking on the extra responsibility of children. It is also possible that additional time spent in one stage means an even longer delay in entering the next stage. As noted below, for example, women who marry at older ages average a longer interval before their first birth than do women who marry earlier. Some of this is due to women's increasing infertility at older ages, but most is due to new attitudes and behavior among women—and men.

Delayed marriage

Delayed marriage characterized much of Western Europe and parts of North America through the 18th and 19th centuries and well into the 20th century, and consequently many women began childbearing in their late twenties and early thirties, since few births occurred out of wedlock. Around 1800, women's age at marriage averaged over 27 in Belgium, France, Germany, and Scandinavia.²⁰ One reason was social custom which dictated that property should be passed to a sole heir, usually the eldest son, and other sons must work and save enough to be able to support a new household before marrying. In North America, abun-

dant land and a sparse population made marriage affordable at younger ages, but there were pockets of relatively late marriage; in Philadelphia around 1880, for example, women's median age at first marriage was 25, compared to the national median of 23 at that time and just over 20 during the 20th century baby boom.

With the availability of effective contraceptives and changing attitudes toward marriage and the family, it is now easier to defer childbearing without deferring marriage or other unions. Are the women who are postponing childbearing in the 1980s marrying at the same ages as their mothers did but simply waiting longer before having children? Or are they instead waiting longer to get married?

Young men and women are now clearly marrying at later ages than they have in the past few decades. In 1950, 68 percent of women aged 20-24 had already married; the proportion had slipped to 64 percent by 1970 and then plunged to only 44 percent in 1983, as Table 4 indicates. The number of couples living together without being married has tripled since

Table 4. Percent of Women and Men Never Married, by Age: 1890-1983

Year	20-24		25-29		30-34	
	Women	Men	Women	Men	Women	Men
1890	52	81	25	46	15	27
1900	52	78	28	46	17	28
1910	48	75	25	43	16	26
1920	46	71	23	39	15	24
1930	46	71	22	37	13	21
1940	47	72	23	36	15	21
1950	32	59	13	24	9	13
1960	28	53	11	21	7	12
1970	36	55	11	19	6	9
1980	50	69	21	44	10	16
1983	56	73	25	38	13	20

Sources: Bureau of the Census, *Historical Statistics of the United States: Colonial Times to 1970*, Part 1 (1975) Series A160-170, and "Marital Status and Living Arrangements: March 1983," *Current Population Reports*, Series P-20, No. 389, June 1983, Table B.

1970, but at 1.9 million in 1983, these couples still made up only 4 percent of all couple households, and they fall far short of compensating for the decline in formal unions at younger ages. In 1983, the percentage of women still never married at ages 20-24 (56) was higher than at any time since 1890, as Table 4 shows. However, the proportions never married among women aged 25-29 and 30-34 in 1983, although more than double the proportions in 1970, were similar to levels in the early decades of the 20th century. The pattern is also true of men, although by 1983, more men over 30 had been married than had their counterparts at the turn of the century.

Table 4 suggests that much of the current delay in childbearing is due to delayed marriage, as in the past. If couples divorce without having children, the time taken to establish a second union could further delay childbearing. But are later-marrying couples also delaying childbirth after marriage?

Delays after marriage

Data on the length of time between first marriage and first birth—the first birth interval—suggest that American women are indeed increasingly likely to defer childbearing after they marry. The median first birth intervals for children born since 1940 to mothers age 20 and older at the births, shown in Table 5, have increased fairly steadily for all these ages since about 1960. Between 1960 and 1964, half of new mothers aged 20-24 had their first births within a year-and-a-half (15.5 months) of marriage. By 1975-79, the median interval had lengthened to two years (24 months). Women over 30 at the birth of their first child have the longest median first birth intervals—more than five years (64.8 months) in 1975-79—but their first birth intervals varied least between 1940 and the end of the 1970s. Since the mid-1960s, the median interval between the first and second births for those women who go on to have a second birth has also lengthened. Thus women are waiting longer after

Table 5. Timing of First Birth After Marriage: 1940-1979

(Median months between first marriage and first birth, by period of child's birth and age of mother at birth)

Period of child's birth	Age of mother at first birth		
	20-24	25-29	30 and over
1940-44	17.6	29.1	60.3
1945-49	17.2	28.9	47.2
1950-54	18.4	33.2	54.3
1955-59	16.2	30.1	53.8
1960-64	15.5	30.4	55.3
1965-69	15.9	33.3	59.1
1970-74	20.1	42.8	56.8
1975-79	24.0	48.9	64.8

Source: Table 9 of source cited on Table 3.

marriage to begin childbearing and also spacing their births farther apart.

What is causing women and men to put off marriage and postpone childbearing after marriage? A likely factor is the new opportunities for women in the paid work force.

Trends in women's work

The world of work and women has been revolutionized since the baby boom era. Fifty-three percent of married women age 16 and over were working or looking for a job in 1984, up from 24 percent in 1950 (see Figure 5, page 18). Young women are changing their commitment to work in fundamental ways. During the 1950s and on into the 1960s, women who had not yet had a child were likely to be employed, but employment rates dropped sharply at ages 25-34, the peak years of childbearing and early child-rearing. Now women are returning to their jobs shortly after childbirth. How can what women do *after* a birth influence the timing of a first birth?

Today's pattern may signal a change from the view of women's paid employment as something to do before beginning the "real job" of childrearing, and later only a supplement to family income. Now the majority of women expect to work until retirement age, with only rela-

Table 6. Occupation of Married White Women Having a First Birth in 1980

(Numbers in percent)

Age of women	Occupation of employed women				Not in labor force
	Professional	Sales, clerical	Services	Crafts, other	
Under 20	2.0	25.9	16.9	9.6	45.5
20-24	15.4	45.2	11.4	10.3	17.6
25-29	36.1	38.5	7.1	6.5	11.8
30 and over	50.2	30.4	5.9	4.1	9.3

Source: NCHS, 1980 National Natality Survey, unpublished tabulations.

Note: Data refer to the woman's occupation in the 12 months preceding the birth.

tively brief interruptions for childbirth. In 1950, the average 20-year-old woman could expect to spend only 14.5 years, or 27 percent of her life, in the labor force. By 1977, the average had risen to 26 years, or 45 percent of her life.²¹ This increasing commitment to the world of work is probably related to women's greater investment in education, as reflected in the rapidly growing number of women acquiring advanced college degrees or the highly specialized training required for the better-paying, more prestigious jobs. Skilled, high-paying crafts once considered for men only, for example, now include a small, but growing number of women. In 1972, only 0.6 percent of electricians and 0.5 percent of carpenters were women; by 1982, these figures had tripled to 1.6 and 1.7 percent. Many women are evidently deferring the added responsibility of a child while they invest in these opportunities to increase their qualifications and then become established in a long-term career. At the opposite side of the coin are very young teenagers who bear a child. Some investigators now feel that one factor in very early childbearing is that these girls see little chance of economic success that would be hampered by the presence of a child.²²

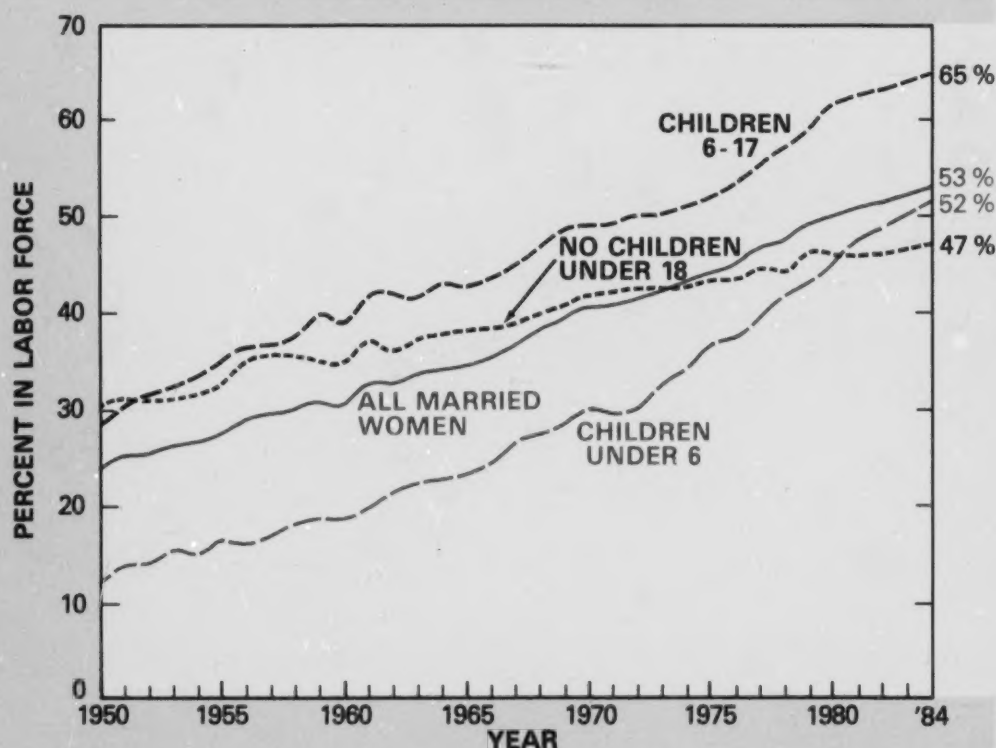
Of course, as we have seen, many married women now in their twenties must work out of sheer economic necessity and are undoubtedly forestalling childbearing until they and their spouses

feel more financially secure. The stereotype of today's delayed childbearer is of a well-paid, professional woman. Data do support this image to some extent, but also reveal the diversity of women who defer childbearing. Half of the married white women who had a first birth in 1980 at age 30 or more held a professional job in the year before the birth (see Table 6). Yet more than one-third (36 percent) were sales, clerical, or service workers. A small fraction (4 percent) were working in other types of jobs. Only 9 percent were unemployed at the time of the birth.

Contributing to women's increased labor force activity and probably also a factor in delayed childbearing is that couples now expect to spend much less time in raising children than their parents did. In the typical baby boom family of three or more children, the time between the first and last births averaged nine to ten years. Now most American women say they expect to have only two children and the median interval between first and second births, though increasing, is currently about three years.²³ This means the first birth can be delayed—and a woman can plan to stop work only briefly for childbirth—with the expectation that the harried years of juggling a job and the demands of small children will be short.

However, the prospect of those harried years, especially the effort of arranging acceptable care for small children while they work, may well prompt many working women to further delay childbearing.

Figure 5. Labor Force Participation Rates of Married Women, by Presence and Age of Children: 1950-1984



Sources: Arland Thornton and Deborah Freedman, "The Changing American Family," *Population Bulletin*, Vol. 38, No. 4 (October 1983) Figure 7; and unpublished data from the Bureau of Labor Statistics, September 1984.

Working mothers and child care

A 1977 study estimated that one-third of working mothers are back at work three months after the births of their babies; seven years later, the figure is probably much higher.²⁴ Fifty-two percent of all mothers of preschool children under age six were working in 1984, up from 12 percent in 1950 and 30 percent in 1970 (see Figure 5). For mothers of school-age children ages six to 17, the increase was from 28 percent in 1950 to 49 percent in 1970 and 65 percent in 1984. These dramatic increases have escalated the problems of combining motherhood with the worker role. Businesses of all types,

from law firms to manufacturers, are having to accommodate to the needs of the mothers among their employees. For working parents, a prime concern is the provision of child care for their preschool children and some before or after school supervision for their school-age children.

Flexibility in work schedules through flex-time, part-time employment, or job-sharing is one way to meet some of the child-care needs. Flex-place, the option to work at home, is another. Companies and government agencies that only recently regarded these options as risky are now beginning to experiment with them in order to attract and keep valued employees. Can two parents on flexible schedules meet their own needs and

Table 7. Child-Care Arrangements for Youngest Child Under Age 5 of Married Mothers Working Full Time: 1982

(Numbers in percent)

Child-care arrangements	1982
Total	100.0
Care in child's home	25.5
By father	12.8
By other relative	8.5
By nonrelative	4.2
Care in another home	45.0
By relative	19.5
By nonrelative	25.5
Group care center	17.3
Mother cares for child while working (and all other arrangements) ^a	12.3

Source: Martin O'Connell and Carolyn C. Rogers, "Child-Care Arrangements of Working Mothers: June 1982," *Current Population Reports*, Series P-23, No. 129 (Washington, DC: Bureau of the Census, 1983) Table A.

^aIncludes children for whom child-care arrangements are unknown.

Note: Data refer to child-care arrangements only while the mother is working.

those of their children? So far there is no definitive answer, but a study of couples' work schedules by sociologists Harriet Presser and Virginia Cain revealed that in 1980, 10 percent of dual-worker couples were working different shifts and part of the reason was to ensure that at least one parent would always be home when the children were.²⁵ In 1982, 13 percent of working wives with a child under five reported that the father cared for the child while they worked (see Table 7). Little research has investigated the effect of such arrangements on the children, the marital relationship, or family well-being.

The U.S. is one of the few industrialized countries with no national day-care program, although low-income families receive child-care subsidies through such programs as Head Start and Aid to

Families with Dependent Children. Employed parents are allowed a tax credit for child care of up to \$720 per child per year, not to exceed \$1,440 per family, in families with annual incomes under \$10,000; in families with annual incomes of \$28,000 or more, the maximum credit is \$480 per child and \$960 per family.²⁶ For most families this is scant compensation when the weekly costs for the care of one child in the Washington, DC, area in 1984, for example, averaged \$75 for private group day care, \$100 in a day-care center, and \$150 for a full-time baby sitter in the child's own home.²⁷

With no national policy or programs for child care, the arrangements parents must make are individualized and often ad hoc. In 1982, as Table 7 shows, 71 percent of the youngest children under five of married mothers working full time were cared for during the day in their own or another private home—41 percent by fathers or other relatives, and 30 percent by nonrelatives. Day-care centers and nursery schools ("group care centers" in Table 7)—some nonprofit, others costly commercial ventures, and all with waiting lists—still accommodated only 17 percent of these children in 1982.

Older working mothers of small children are much less likely than younger mothers to rely on fathers, grandparents, and other relatives for child care while they work and more likely to depend on day-care centers or "family day care"—care by a nonrelative in a private home other than the child's. In 1982, as Figure

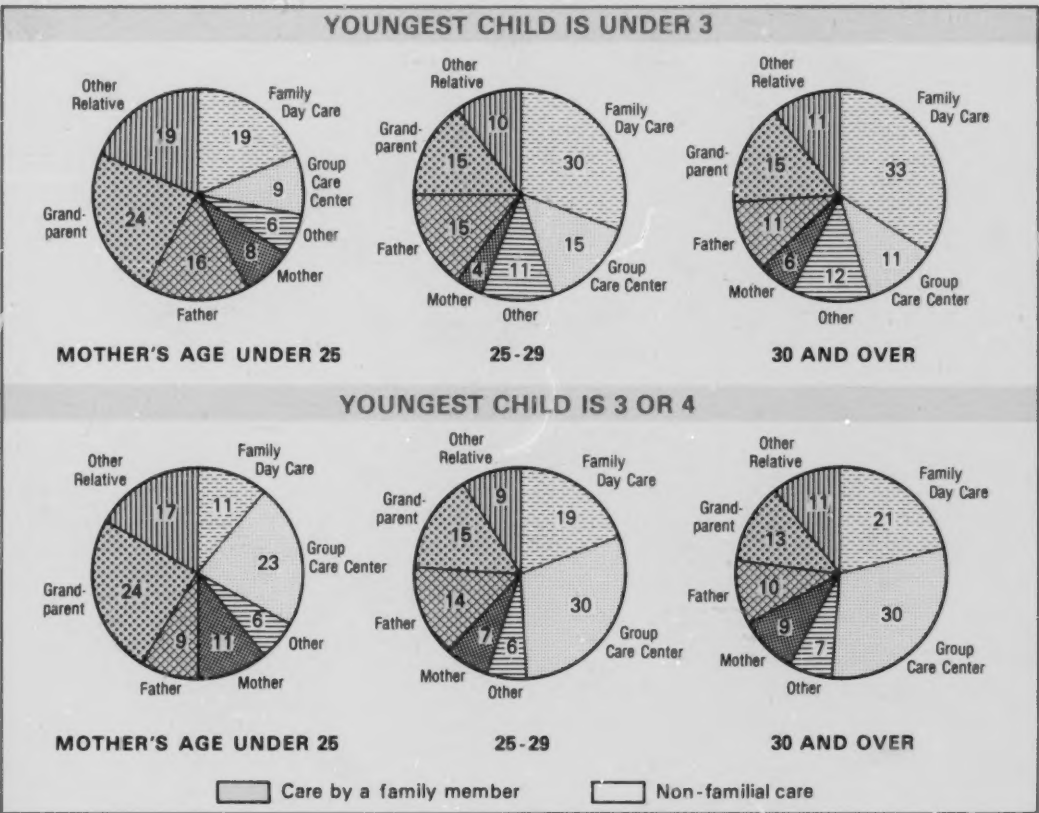
Mother, contract supervisor, 34; father, purchasing director, 30; firstborn, 6 weeks:

On child care, mother: "About three weeks ago, I looked at him [the baby] and thought, 'How can I leave him?'" Father: "What do you do? You can't take the little guy to work with you . . . So you just go out and find the best person you can."

—The Washington Post Magazine, June 24, 1984

Figure 6. Child-Care Arrangements for Youngest Child Under Age 5 of Married Mothers Working Full Time, by Ages of Mother and Child: 1982

(Numbers in percent)



Source: Bureau of the Census, June 1982 Current Population Survey, unpublished tabulations.

Note: Family day care = care by a nonrelative in a home other than the child's.
Group care center = day-care center or nursery school.

6 shows, 43 percent of married mothers age 30 or more who were working full time and had a child under three reported that the child was cared for during the mother's working hours by a family member (including 6 percent by the mothers themselves), while 67 percent of their counterparts under 25 reported these arrangements. Forty-four percent of the mothers over 30 said their infants or toddlers were sent to day-care centers or family day care, both of which are more costly than care given by a relative;

only 28 percent of the youngest mothers gave this response. These differences were very similar for children ages three or four. Older mothers may have better-paying jobs and be more able to pay for nonfamilial care, or perhaps may live farther from relatives.

Only an estimated 1,000 companies were offering child-care assistance to employees in 1984, although the number has doubled since 1981 when tax laws were rewritten to allow child care as a nontaxable employee benefit.²⁸ Most of



Child care is generally the mother's responsibility and her job may have to bend in some way.

this is underwriting of the costs of child care arranged for by parents themselves, and many firms now operate child-care information and referral services. Only about 400 companies, mostly high-tech firms, hospitals, or manufacturers of children's products, had on-site day-care centers in 1984. Child care is expensive and most businesses still hesitate to subsidize this benefit without some indication that worker productivity will increase.

Thus, the care of small children remains primarily the responsibility of individual families and generally within the family the responsibility is the mother's. It is the wife's job that must bend in some way, although some fathers are now

adapting their jobs to share the load. So far, it is the employees considered most valuable to their employers who usually have the options of flexible working arrangements and subsidized child care. But it is likely that the growing ranks of working mothers will force more and more employers to offer these options to all employees as a matter of course.

The effect of child care on children is of major concern to child development specialists, parents, policymakers, and service providers. Research on these effects shows that a sweeping question, such as "Is child care good or bad for young children?", is not as important as more detailed questions about the fit between type of care and individual children's needs or the specifics of the care, such as the optimal number of children per adult and sanitary provisions. A major gap in the research on the effects of child care stems from the emphasis on children cared for in day-care centers or nursery schools. It is important to understand the effects of these types of care, especially since they can be more easily regulated. But much more needs to be known about the welfare of the vast majority of small children of working mothers who are cared for by other family members or in a group in the home of a nonrelative.

Education

Education is closely related to delayed childbearing; the more education a woman has the more likely she is to delay both marriage and childbearing.²⁹ One obvious reason for this association is that education demands a time commitment.

A measure of American women's increasing educational attainment in the past two decades is the steep rise in the proportion of women obtaining graduate degrees. Between 1962 and 1982, the proportion of master's degrees earned by women increased from 33 to 51 percent and among doctoral degrees, women's share rose from 11 to 32 percent.³⁰

Why are women getting more education? One reason, applicable to both

men and women, is that, with schooling more widely available, jobs which formerly demanded, say, a high school education, now require some college training. Similarly, social norms on acceptable levels of education have been upgraded. Where once a primary school education was acceptable, a high school diploma is now demanded. Where graduation from high school signaled achievement, a college degree is now the basic goal among middle class families. These changing norms are partly a response to changes in the minimum requirements to fill certain jobs. For women, another explanation is their increased opportunities in professions formerly dominated by men, such as medicine and law. In 1960, women received only 6 percent of the medical degrees conferred, 2 percent of law degrees, and a negligible proportion of dentistry and engineering degrees. In 1982, women's shares were up to 25 percent of medical degrees, 32 percent of law degrees, 14 percent of dentistry degrees, and 10 percent of engineering degrees.³¹

Beyond the simple competition of time, increased education can also lead to delayed childbearing by broadening horizons, imparting new values, changing aspirations, and creating new skills, all of which can motivate an individual to try other options before settling into parenthood.

Population dynamics

As we have already seen, the disproportionate size of the baby boom generation has worked against them in their efforts to get comfortably established in the working world and has probably been a factor in delayed childbearing. Another twist in this chain set off by population dynamics is what demographer Paul Glick labels the "marriage squeeze"—a phenomenon caused by a shortage of men relative to the number of women in the prime ages for first marriage (18-25 for women and 20-27 for men).³² The shortage came about because the number of babies born each year as the baby

boom mounted from 1947 to its peak in 1957 was larger than the number born the year before and women tend to marry men about two years older than themselves. When women born during these ten years reached the usual ages for marriage, there was an insufficient number of men about two years older than themselves from which to choose their mates. Many of these women at the vanguard of the baby boom either had to select men who were not two years older or defer marriage—and childbearing along with it. Now the squeeze has reversed; men born between 1957 and 1964 as the baby boom waned are finding fewer women two years younger than themselves from which to select wives. Sociologist Robert Schoen, with a method devised to measure the marriage squeeze, calculates that it will have had little effect on the overall level of marriage in the baby boom generation, but has indeed affected the timing of their marriages.³³

The baby boom generation's delayed marriage and childbearing fit well with economist Richard Easterlin's theory that the relative size of a birth cohort strongly affects its life experiences.³⁴ The parents of the baby boom generation, he observes, come from the relatively small cohorts born during the depression of the 1930s. This, plus the booming post-World War II economy, meant that the men of that generation had no trouble securing good jobs when they entered the labor force. Further, their ideas of what constituted a good income and living standard, shaped as they grew up during the depression, were modest. Marriage and family-building consequently came early. The large baby boom generation has experienced the reverse as they have reached young adulthood, Easterlin points out: there are more of them than there are good jobs. But growing up during the prosperous 1950s and 1960s, they nurtured high expectations for their future living standards. So many of them have been deferring marriage and childbearing as they struggle to

match their lives with their expectations.

Easterlin's theory presumes that people's views about marriage and children have not changed and women are not strongly attached to the labor force. He predicts that when the cohorts born during the baby bust of the 1970s reach young adulthood, their smaller numbers will once again boost job and earnings opportunities for young men, marriage and childbearing will again come early, and women will retire to raise their children.

Other researchers concede that Easterlin's theory has much validity and admire its elegance, but stress that norms and customs are changing. These changes, they argue, will prevent another repetition of the cycle.³⁵ Few expect women to leave the labor market, which they have recently entered in such large numbers, to stay home while they raise their children. With their increasing opportunities in the work place and commitment to careers, this would be too costly a choice.

Medical and Health Issues

Many women who decide to delay childbearing past age 30 worry whether their decision will jeopardize their chances to conceive and bear a healthy baby. Are these fears well founded?

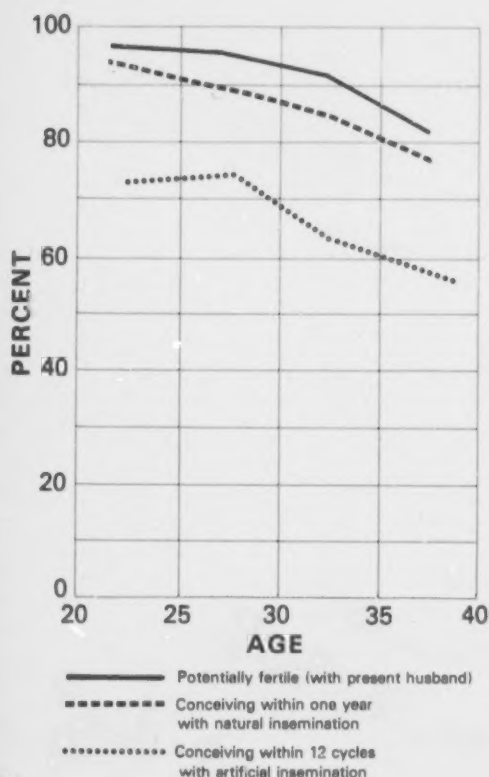
Infertility risks

The fears of infertility at later ages were not allayed by the wide publicity given to a French study reported in 1982 in the *New England Journal of Medicine*, which suggested that the risk of infertility begins to rise sharply as early as age 30, five years sooner than had been popularly supposed.³⁶ Conducted by the Federation CECOS, the study tracked the conception rates of 2,193 childless wives of infertile men who had been artificially inseminated with donor sperm. After 12 menstrual cycles, approximately 74 percent of the women under age 31 had conceived. The percentage dropped to

only 62 for women aged 31-35 and to 56 for women 36-40. Although this study has advantages—in particular, it eliminated the need to control for patterns of intercourse and husbands' ages—its shortcomings were quickly pointed out by Population Council demographer John Bongaarts.³⁷ Artificial insemination is much less likely to result in conception than natural insemination, he argued, and a year is too short a time to capture the full proportion of women who will eventually conceive. From data reported in the 1976 U.S. National Survey of Family Growth, he estimated married women's conception rates after a year of intercourse without contraception to be much higher at all ages than those of the French study: 93 percent at ages 20-24, 89 percent for women 25-29, 84 percent at 30-34, and 77 percent for women 35-39. (Compare the middle and bottom curves of Figure 7, page 24.) Based on studies of noncontracepting historical populations, he concluded that potential long-term conception rates at successive ages are higher still (top curve of Figure 7). These translate into 4 percent of women unable to conceive at ages 20-24, 6 percent at ages 25-29, 9 percent at ages 30-34, and 20 percent at ages 35-39. Bongaarts adds that these estimates based on historical populations may in fact "be conservative to the extent that modern medical technology can eliminate some previously untreatable causes of infertility."

Bongaarts' findings were questioned in turn by three researchers at the National Center for Health Statistics who pointed out that his historical samples included many older women who had already had children and one—the Hutterites—thought to be particularly fecund.³⁸ Princeton demographers Jane Menken and Ulla Larsen tried to resolve the dispute, using several reliable historical data sets.³⁹ They confirm Bongaarts' findings that infertility does rise with age, but only moderately before age 35. Their estimates are that 6 percent of women are unable to conceive at ages 20-24, 9

Figure 7. Percent of Women Conceiving Within One Year with Artificial and Natural Insemination, and Percent of Women Potentially Fertile, by Age



Source: John Bongaarts, "Infertility After Age 30: A False Alarm," *Family Planning Perspectives*, Vol. 14, No. 2 (March/April 1982) Figure 2, p. 77. Reproduced with permission.

Note: The data on natural fertility are based on age-groupings of 20-24, 25-29, etc.; data on artificial insemination are based on age-groupings of 21-25, 26-30, etc.

percent at 25-29, and 15 percent at ages 30-34. After that the percentage rises sharply to 30 among women 35-39 and 64 at ages 40-44.

The debate stirred up by the CECOS study suggests that although that study

clearly overestimated the increased difficulty of conceiving after age 30, women who are deferring a first birth to their mid-thirties should be aware that they may encounter some difficulties. Some researchers argue that even at this age a woman is likely to have little trouble conceiving, providing she is in good health and free from fertility impairments that can occur at any age (of which the two most common causes—endometriosis and pelvic inflammatory disease—can be revealed by awareness of one's own body and regular gynecological check-ups, and treated).⁴⁰

Pregnancy and delivery risks

If a woman waits until she is a little older to have a first child, can she expect more problems with pregnancy and delivery? Many researchers have examined the effects of a mother's age on the course of pregnancy and labor. Obstetricians generally agree that ideally, women should begin childbearing before age 35.⁴¹ Since currently 95 percent of first births to American women age 25 and older are to women aged 25-34 (see Table 1, page 6), most women who defer childbearing do not have to be concerned. A recent study of Swedish birth data revealed that women over 30 are more likely than younger women to have a late miscarriage (after 27 weeks) with a first pregnancy but no more likely to have a firstborn die in the first 28 days of life.⁴² Demographer Dorothy Nortman, in a 1974 review of the effects of parental age on pregnancy outcome, also found that the unfavorable odds increase with age, but not so much as to deter older women from a first pregnancy.⁴³ As long as a woman is in good physical shape and receives proper nutrition and care during her pregnancy, age should not be a major concern. Another recent study supports this conclusion. Reported in 1980, this study compared experiences during delivery of a group of women 35 and older having a first birth with those of women aged 20-25 having a first birth and women 35 and older having a sec-

Dr. Cecil Jacobson, reproductive biologist, pioneered research in amniocentesis:

Sees a link between women's concern with diet and fitness and the drop in prematurity rates. "Women are in far better shape at 35 than they used to be."

—*The Washington Post*, January 16, 1984

ond or later birth and concluded that having a first birth at age 35 or more does not automatically mean that a woman incurs a high risk of having a difficult pregnancy and labor.⁴⁴

Risk of birth defects

Are women who are older at first birth at greater risk of bearing children with birth defects? This question is often asked by women trying to decide if they can delay childbearing a little longer.

Birth defects have many causes. They can be caused by hereditary disorders, such as Tay Sachs disease, by drugs like thalidomide taken early in pregnancy, by exposure to certain viral infections, such as rubella, early in pregnancy, or by chromosomal error. Of the causes of birth defects, only chromosomal error is known to be linked to the mother's age at birth. The press coverage lavished on Down syndrome—one of the most common chromosomal abnormalities—has tended to make mother's age seem a more important factor in birth defects than it is.

About one of every 16 children is born with some type of birth defect; many of these, however, are not serious.⁴⁵ Tracking the prevalence of birth defects is difficult because official statistics, based on birth certificates, record only those defects that are diagnosed at birth or shortly thereafter. Many defects like deafness, for example, may not be apparent until the child is older. A recent National Institutes of Health report estimates that major defects occur with 3 to 5 percent of

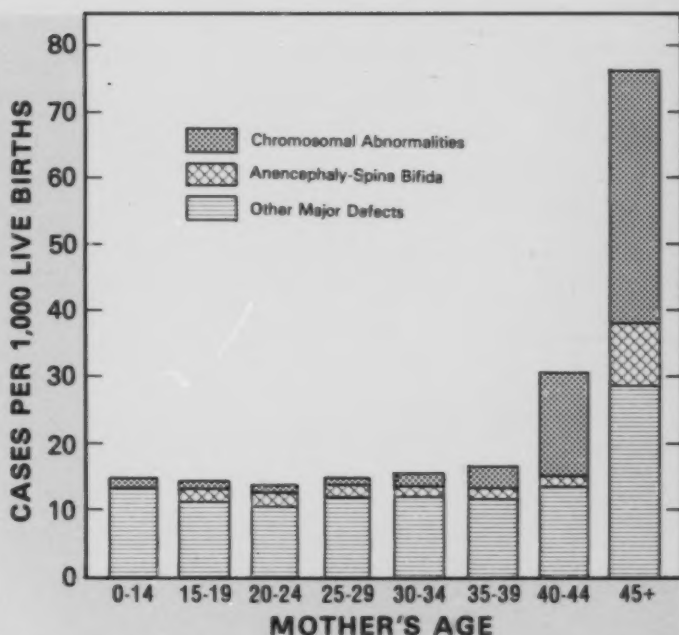
births.⁴⁶ Thus, between 110,000 and 184,000 of the 3,680,577 babies born in 1982 in the U.S. had a serious birth defect. Some of these were genetic disorders, such as cystic fibrosis, muscular dystrophy, and sickle cell anemia; some were congenital malformations, of which spina bifida is probably the most familiar; and some were Down syndrome and other lesser known chromosomal abnormalities.

Dorothy Nortman, in her review of the literature relating mother's age to pregnancy outcome, estimates that chromosomal abnormalities occur in one of every 250 conceptions. About 88 percent of these are aborted spontaneously, however, often before a woman even knows she is pregnant. The overall risk of actually giving birth to an infant with a major birth defect potentially linked with a mother's age—a chromosomal abnormality—is well under one per 100 births. However, there is clear evidence that this risk increases with the mother's age at birth, as seen in Figure 8 (page 26). This study of births in Atlanta between 1968 and 1975 estimates the rate of chromosomal abnormalities at 1 per 1,000 births (0.1 percent) for mothers under age 35, rising to 3 per 1,000 (0.3 percent) at ages 35-39, 16 per 1,000 at ages 40-44 (1.6 percent), and 38 per 1,000 (3.8 percent) at 45 and over. All births in this study were to mothers who already had children.

Improved techniques of prenatal diagnosis can now detect fetal abnormalities, whether or not associated with a woman's age.⁴⁷ This makes possible a decision to abort a defective fetus, if that course of action is chosen, or to operate on the fetus during pregnancy or on the baby immediately after birth. With advance warning of severe birth defects, surgical teams can be in place at the birth and parents can be better prepared to cope with the special problems they will face.

Amniocentesis and ultrasound are the two best known prenatal diagnostic techniques; a promising new one, chorionic villi sampling, is currently being tested.

Figure 8. Incidence of Major Birth Defects by Mother's Age: Atlanta, 1968-1975



Source: Marshall F. Goldberg, Larry D. Edmonds, and Godfrey P. Oakley, "Reducing Birth Defect Risk in Advanced Maternal Age," *JAMA*, Vol. 242, No. 21 (1979) Figure 1, p. 2293.

These techniques are not the only ones used and are not for use with all pregnancies. Because there is a certain amount of risk involved with any medical procedure, these methods are to be used primarily for pregnancies known or thought to be at higher risk of certain disorders.

Ultrasound—an image of the fetus and surrounding uterus made with high-frequency sound waves—is useful as an adjunct to amniocentesis and also to pinpoint the stage of pregnancy, detect multiple pregnancies and fetuses that have died and not already been spontaneously aborted, and evaluate uterine abnormalities that might cause problems.⁴⁸ Now under clinical research is its use with a mid-trimester pregnancy to detect defects in the fetus' body structure or internal organs.

Amniocentesis, developed in the late 1960s, is currently used by 30 to 40 percent of pregnant women aged 35 and older and an increasing number of younger women.⁴⁹ It is usually performed between the 16th and 18th weeks of

pregnancy. In the test, a sample of amniotic fluid is withdrawn from the uterus by a needle inserted through the abdominal wall and the fetal cells in the fluid are examined in a laboratory. Obtaining results takes up to three weeks. The procedure is done in the physician's office, usually under local anesthetic.⁵⁰ Ultrasound is recommended before amniocentesis to establish the positions of the fetus and the placenta. The procedure carries little risk of miscarriage or other serious complications.

Chorionic villi sampling involves inserting a thin plastic catheter through the cervix to withdraw a sample of chorionic villi. The chorion is a membrane, originating from the embryo, that surrounds the fetus and later becomes part of the placenta. Villi are minute coral-like forms covering the surface of the chorion. Because they are embryonic, analyzing them provides much of the information obtained with amniocentesis. And because the sample is larger than that obtained through amniocentesis, the tests can be performed more quickly, often

within a week, which reduces the stress of waiting for test results. Also, since the procedure is performed between the eighth and tenth weeks of pregnancy, an abortion can be performed in the safer first trimester of pregnancy if results indicate severe birth defects and the decision is made not to carry the fetus to term. More than 20 test centers in the U.S. are likely to be performing this procedure by the end of 1984 and it is expected to replace amniocentesis for most prenatal diagnosis by the end of the decade.⁵¹

The man's role

The mother's role in the birth process is so obvious and important that few studies have examined the man's contribution. Without him there would be no pregnancy and he provides half of the genetic material for the child. Yet little is known about changes in his fecundity with age or his effect on the outcome of the pregnancy. Because men and women who marry tend to be close in age, it is difficult to separate the effects of a father's age from the well-known effects of a mother's age. A few studies, however, provide some clues.

Barbara Anderson used the 1911 census of Ireland to examine changes in a couple's fertility by the man's age, controlling for age of the wife and length of the marriage.⁵² These data were selected because age differences between husbands and wives were substantial at the time and had been for the 20 years before the census and couples practiced no birth control that would mask changes in the husband's fecundity. Her analysis suggests that men's ability to impregnate a woman declines steadily after age 40.

More recent research which provides some support for this finding analyzed the characteristics of semen, carefully controlling for the time since last intercourse before collection of the semen, an important factor in variation.⁵³ This study found an inverted U-shaped pattern in

semen quality; a gradual improvement in quality up to age 25, followed by a plateau between ages 26 and 35, and then a decline. The most marked changes occurred in the 41-45 age group, which coincides with the decrease in male fecundity beginning in the early forties which Anderson noted. (Nortman, in her 1974 literature review, also noted that the few then existing studies suggested that the quality and quantity of sperm deteriorate with a man's age.)

Men, like women, can have physiological problems which make conceiving a child difficult. With male infertility, the commonest problems are low sperm count, blocked sperm ducts, and defective sperm. About 40 percent of diagnosable cases of infertility can be attributed to the man and 20 percent to both partners.⁵⁴

Generally the father's role in pregnancy outcome is related to congenital conditions. Genetically defective sperm, for example, are one cause of early miscarriages.⁵⁵ Some research indicates that paternal age may be more important than maternal age in some forms of Down syndrome, although not all researchers agree with this.⁵⁶ Research not focusing on age suggests that about 24 percent of Down syndrome cases could result from early chromosomal error in the father.⁵⁷

Gene mutations which can cause birth defects seem to be more prevalent the older the father is. Although the reasons for this are not clear, it could be that since sperm are produced throughout a man's life, there is much room for error and mutation, perhaps influenced by environmental factors. This possibility is at the center of the controversy over Agent Orange, the defoliant used during the Vietnam War, which veterans charge has caused serious birth defects in their children. "Fresh" gene mutations are not possible with a woman whose stock of oocytes from which an egg is formed each month is with her from birth. Overall, gene mutations are relatively rare and it seems that mother's age is a more

important factor in pregnancy outcomes.⁵⁸

Dealing with infertility

Infertility, defined as the inability to conceive after a year of regular sexual intercourse without contraception, is estimated to affect 15 percent of American couples.⁵⁹ Some of these are couples who already have had one or more children but have difficulty conceiving an additional one. What recourse is there for couples who have trouble conceiving when they decide they are ready for a child? Some of these couples do not pursue the matter further and join the permanently childless population. Others seek medical attention; progress in diagnosing and treating infertility has been rapid in the past decade. There are also alternative routes for becoming parents when one parent is sterile; two of these are artificial insemination and surrogate motherhood. If the woman is ovulating but her fallopian tubes are blocked, she might consider in-vitro fertilization. Before a couple resorts to such methods, however, they generally seek help from an infertility specialist.

Infertility can be caused by an assortment of factors that interfere with the reproduction process. The problems may be subtle and by themselves only slightly reduce fecundity, but combined with other subtle problems could lead to substantially reduced chances of conception. Thus diagnosis involves examining both partners.

An infertility evaluation can take as little as two months but is generally performed over several months or even years, depending on the wants and needs of a particular couple. Because so many factors can be involved, there is no standard procedure followed by every specialist in every case. In the initial interview, the couple and the specialist discuss the couple's medical history, their concerns, and procedures they might try. Before this meeting, it is helpful if the woman has kept a record for the past month or two of her basal body tem-

perature (the temperature before getting up in the morning, taken orally or rectally), noting on it the dates of intercourse, any unusual pain, and changes in the character of her cervical mucus. This chart will enable the physician to determine whether the woman is ovulating and aid in deciding the best course of action to pursue.

Procedures commonly performed during an infertility evaluation include the following:

Hysterosalpingography. This office procedure reveals any abnormalities of the uterus or fallopian tubes and may flush away obstructions in the tubes. A water-soluble dye is injected through the cervix into the uterine cavity and tubes and these areas are then X-rayed.

Semen analysis. Semen from the male partner is analyzed to determine its quality, quantity, and motility. A sample of blood or cervical mucus from the woman may be analyzed along with the sperm if it is suspected that she may have antibodies or allergies to the sperm.

Post-coital exam. In this procedure, the woman's cervical mucus is examined after intercourse during her peak fertile period. The test reveals if there is enough cervical mucus to carry the sperm to its destination. It also measures the acidity of the mucus and the ability of the sperm to survive and move through the mucus.

Endometrial biopsy. This office procedure determines if a woman is ovulating by examining a small segment of the endometrium, the lining of the uterus.

Laparoscopy. In this surgical procedure, the abdomen is distended by carbon dioxide and a small endoscope inserted through the navel, enabling the surgeon to view the pelvic organs. It is generally used if pelvic adhesions are suspected or when all other tests have returned normal and pregnancy has still not occurred.

It is estimated that about half of the couples who seek help from a specialist will conceive, about 10 percent will be infertile for no apparent reason, and the remaining 40 percent will have some

problem that permanently prevents them from becoming parents.⁶⁰ The medical technology that is so widely publicized is usually resorted to only by couples who are unable to have children in any other way.

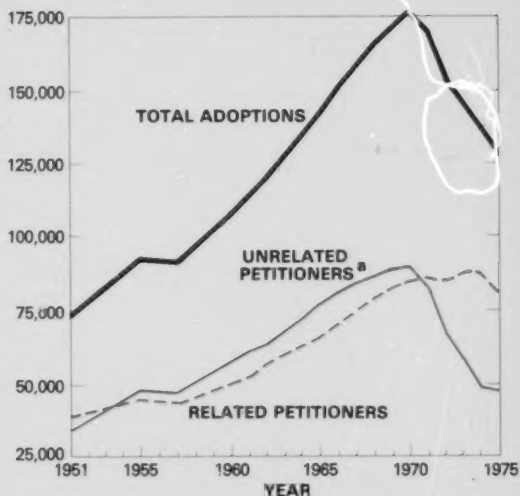
Artificial insemination has been widely practiced for the past 40 years, using the husband's or a donor's sperm. Donor sperm is more common since this method is usually a means of circumventing a man's infertility. As the term indicates, the sperm is artificially deposited at the mouth of the woman's cervix. The method produces an estimated 10,000 to 20,000 births annually in the U.S.⁶¹

In-vitro fertilization. Baby Louise Brown, born in 1978 in England, is the first and the best known of the so-called "test-tube babies." By the end of 1984, some 1,000 other children will have been born who were conceived in the same way, including about 100 in the U.S.⁶² This technique is used when the woman is ovulating and her husband is fertile, but they are unable to conceive because of irreparable damage to her fallopian tubes. Several eggs are surgically removed from the woman's ovaries and then fertilized in a shallow laboratory dish with the husband's sperm. A few days later, one or more of the embryos is implanted in the wife's uterus. It is possible to use donor sperm or donor eggs in the procedure.

Surrogate motherhood. This highly publicized and controversial procedure has produced some 100 to 150 babies in the U.S. since the late 1970s.⁶³ It is an option for a woman who is physically unable to conceive and carry a pregnancy to term. A second woman is fertilized with the husband's sperm by artificial insemination. She carries the child to term and then gives it to the original woman and her husband.

Embryo transfer. This method, devised for women who are able to carry a child but unable to produce eggs, has produced at least two live births to date in the U.S.⁶⁴ A second woman is in-

Figure 9. Adoptions in the U.S.: 1951-1975



Source: Penelope L. Maza, "Adoption Trends: 1944-1975," *Child Welfare Research Notes*, No. 9, August 1984, Figure 1.

*Excludes adoptions by related individuals, e.g., a man adopting his stepchildren.

seminated with the husband's sperm. About five days later, the fertilized egg, or embryo, is washed out of her uterus and placed in the wife's uterus. It is then the wife who carries the pregnancy to term. Essentially the second woman is donating an egg.

Adoption

Adoption, another way to enter parenthood, has received much attention in recent years as the number of babies available for adoption has apparently dropped steeply while the demand for them remains high. In earlier decades, maternity homes flourished as a way for unmarried women to bear their children and place them for adoption. Pregnant single women are now more likely to keep their children or to have abortions. Estimates of the number of adoptions in the U.S., available only through 1975, show a sharp decline after 1970 (see Figure 9).

With no recent national data or stan-

standardized procedures, adoption is a complicated issue. The total number of babies available for adoption, the number actually adopted, and their characteristics are unknown, as is the demand for babies to adopt. Procedures and record keeping vary from state to state and few statistics are published. Adoption may be channeled through church groups, state welfare agencies, or lawyers' offices. Some information is collected on international adoptions. In 1983, the State Department recorded 7,350 adoptions of non-U.S. citizens; 4,545 of these were Korean nationals.⁶⁵

Couples who decide to adopt must contact several groups, or—if they prefer to adopt privately—lawyers who specialize in adoptions. Many agencies have restrictions on whom they will consider for adoption. Church-sponsored agencies, for example, often require a couple to be a member of a particular religion. Often there are limitations on how old a couple can be, which can rule out couples who have delayed childbearing and find out too late to qualify for an adoption that they are infertile. Although private adoptions do not have these restrictions, the natural mother has the final say in who gets the baby. And generally she is allowed a certain amount of time to change her mind before the adoption is final. Thus private adoption carries its own risk.

Support networks

Many couples who are involuntarily childless and those considering adoption feel isolated. Undergoing an infertility evaluation can strain a marriage. Holidays can be particularly difficult for the childless couple. Couples considering adoption may find family and friends unsympathetic, particularly if they are able to have children but choose instead, or in addition, to adopt. To help childless and adopting couples cope with their special problems, several support groups have been formed in recent years. Among these are:

RESOLVE, Inc. (P.O. Box 474, Bel-

mont, MA 02178), a nonprofit organization with 43 chapters nationwide, provides counseling, referral, and support to infertile couples. It maintains a list of specialists in infertility as well as information on techniques used to diagnose and overcome infertility, and also provides information on adoption.

Ours, Inc. (3307 Highway 100 North, Minneapolis, MN 55422), with 100 chapters nationwide, provides advice on adoption procedures before adoption and support and special activities for families after adoption. Most members have adopted children from other countries, but couples adopting American children are welcome to join.

NACAC (North American Council on Adoptable Children, 810 18th Street N.W., Washington, DC 20006), an umbrella organization for 600 parent groups, maintains lists of parent groups and agencies who can provide before-and after-adoption help to couples adopting American children with special needs: those with physical, emotional, or mental disabilities, sibling groups, minority children, or older children.

Delayed Childbearing and Family Life

Couples who delay childbearing are a diverse group, as we have seen. They include couples who had their firstborns right when they planned to, those who would have preferred them earlier but felt they could not afford children, and others who married at later ages but would have married sooner if they had found suitable mates. Delayed childbearers also come from all racial, ethnic, and socioeconomic groups, but the largest proportion are white, highly educated, two-career couples. Because their backgrounds and experiences differ from those of couples who started their families early, one might expect their family life, behavior, and attitudes to be different. They are

likely to have high aspirations for their children and more to spend on providing them with expensive material goods and education. However, there is little research so far on the implications of delayed parenthood for family life. Because of this and the diversity of the group, we must be cautious about making generalizations, but there are studies in a variety of areas that provide some insights.

Marital relations

Although the U.S. divorce rate has leveled off in the early 1980s, this has followed a dramatic two-decade climb, from about 10 divorces per 1,000 existing marriages in 1960 to just under 24 per 1,000 in 1980.⁶⁶ Have the couples who have deferred childbearing been experiencing these high rates of divorce?

Several researchers have shown that the older a person is at marriage the less likely he or she is to separate or divorce.⁶⁷ Since much of today's delay in childbearing stems from delayed marriage, it seems likely that separation and divorce rates are lower among delayed childbearers than they are among couples who have their children earlier. However, we do not know what proportion of the couples who have married and started families at older ages have previously been married. Disruption rates are higher in remarriages, probably because these people have already accepted divorce as a resolution to an unhappy marriage. If the proportion of remarried couples is large, this might offset some of the stability due to later ages at marriage.

What about couples who do not delay marriage but do delay the first birth for a long time after marriage; are they less likely to separate or divorce? There is reason to suspect that they are. To be counted in this category, a couple must already have survived several years of marriage, and disruption rates are highest in the early years of marriage. The period without children allows them time to establish themselves as a couple. And they are more likely than younger first-

Director, Parents Over Thirty project:

"Older parents are shocked at the changes which strain the marriage The Super Parent syndrome sets in. Each expects the other to be perfect, and the child better be, too. All kinds of unrealistic expectations build up [When both parents have careers] How can they possibly do it all and still maintain the intensity of their lives together? They simply can't."

—USA Today, July 9, 1984

time parents to have planned the birth so it will not be as disruptive a factor in their lives.

If disruption rates are indeed lower among delayed childbearers, does that mean marital satisfaction is higher? No research has looked at this issue. Certainly the additional time without the responsibilities of parenthood allows these couples more time to understand and gain confidence in themselves as individuals and in each other and to learn how to function effectively as a couple. On the other hand, many of these couples are now juggling demanding careers and childraising. They are the leading edge of today's young men and women who are trying to define new roles for themselves both within and outside the household. They have high expectations for both themselves and their children. The complexity of their lives and the goals they have set could lead to dissatisfaction or frustration at not being able to handle all their responsibilities equally well.

On the other hand, these couples may

Woman lawyer, 34; firstborn now 2:

"The price [of the child] is very high; the emotional turmoil, the exhaustion, the frustration of having too many things to do and not enough time."

—The Washington Post, August 27, 1984

find that the benefits of delayed parenthood outweigh the costs. A recent study that interviewed couples about to have a first child in their thirties and similar couples who had opted not to have children found that the pregnant wives expected more benefits as well as costs to having children than their husbands did, but both the parents-to-be and the childfree couples perceived more costs than benefits in parenthood.⁶⁸ However, when the delayed parents were re-interviewed six to eight months after their baby's birth, it appeared that they now felt parenthood would bring more benefits than they had expected, especially the men. The authors note: "The psychological impact of parenthood has been powerful and positive for these men and women and, in general, something they did not expect nor for which they were prepared." These couples now saw themselves as more experienced, more patient, and much better able financially to become parents than they would have been in their twenties. One new father put it: "I would have felt deprived if I couldn't have gone to the beach with a keg of beer and the boys when I was in my 20's. But I've done all that and so it seems trivial now."

Family size and childspacing

Women who are older at first birth generally have fewer children altogether than women who begin earlier. One reason is biological: they have fewer years left in which to bear children. But they also tend to prefer smaller families. In recent years, however, the two-child family seems to have become established as the preferred norm in the U.S., so the timing of births rather than their number is now the more interesting question.

There is one small contradiction to the adage, "Later means fewer births"—that is the chance of having a multiple pregnancy. About 1 percent of all pregnancies end in multiple births, mostly twins. Identical twins appear to occur randomly, but the occurrence of fraternal twins (a boy and girl or nonidentical twins



The chances of having fraternal twins go up for older mothers.

of either sex) varies by family history, race, the number of children the mother has already had, and her age. The chance of bearing twins increases with the number of children a woman has had, but irrespective of this, women 35-39 have the highest rates. Women aged 35-39 are twice as likely to have twins with their first pregnancy as teenagers are (1.36 versus .63).⁶⁹

Taking a fertility drug also increases a woman's chances of having a multiple pregnancy. The chances vary according to the drug and high order multiples can and do occur; of the 11 living sets of quintuplets in the U.S. as of March 1984, nine were conceived after their mothers had taken fertility drugs.⁷⁰ But the most likely multiple birth is still twins.

The spacing between children is sometimes left to chance, but often couples weigh the alternatives and choose what seems best for them, although they may not always be successful. Two children closely spaced have advantages, particularly for a mother who wants to remain in the labor force. She will have

fewer years with preschool children and consequently fewer years when she has to stay home or find suitable child care for large portions of the day. On the other hand, closely spaced children also mean there is less time to enjoy each child separately and the demands of two very young children can be extra tiring. And later on there can be the financial burden of having two children in college at the same time. Research suggests that parents spend less per child when children are closely spaced, but the difference between a one-year and a four-year interval is only 5 percent.⁷¹

Parent-child relations

A woman who is 20 at the birth of her first child will be 36 when her child is 16. A woman who is 35 at first birth will be 51 when her child is 16. What do these age differences mean for relations between parents and children? Will the older mother find she is too tired to cope with the demands of a teenager? Will the age gap between them seem overwhelming? Sociologist Alice Rossi explored these questions with a small, nonrepresentative sample of women in intact families.⁷² She found that the older a woman was at the birth of her first child, the more difficult she found childrearing to be, not only at the infant and toddler stages, but also during adolescence. The reasons for this are not clear. If women feel they started childbearing too late, they might constantly feel the stress of being out of step. Or it is possible that these women have generally felt in control and have planned their lives but now find that raising children is often unpredictable and disorderly. These results are not conclusive. Understanding the importance of parental age for the relations between parents and children will require more studies using larger, more representative samples.

The older mother may be "winding down" as her child is "winding up," but will this strain their relationship? Perhaps the presence and needs of a child will avert a "midlife crisis" for her. Certainly

Erma Bombeck (three children born between ages 26 and 31):

"It probably sounds like a lot of fun having a baby who will sit around and connect liver spots on Mommy's arm [But] just when the baby is outgrowing the need for naps, you'll grow into them. When his teeth start growing in, yours will start coming out There is no doubt in my mind I will race my grandchild for the baby food."

—*The Philadelphia Inquirer*, July 22, 1984

Mother, potter, 39; attorney father, 40; firstborn, 9 months:

"The baby will keep me younger [For my husband] it made 40 great We both feel that the midlife crisis will be eased."

—*The Philadelphia Inquirer*, July 22, 1984

Child psychologist:

"They [older parents] have experienced more, know more These kids are being nurtured by parents who are functioning at their peak."

—*USA Today*, July 9, 1984

her life will be full, with little time to worry about what is coming next, and her greater experience and maturity should be of help in coping with difficulties that arise. Most likely, too, she will have more money so she can purchase some relief from the demands of housework and childrearing.

Family economic well-being

Do couples who have delayed children spend more on them? This seems likely from the outset since they will already have been able to accumulate more assets before the first birth with both parents working longer at generally better-paying jobs. Once childraising begins, Urban Institute economist Thomas Espenshade has shown that parental expenditures go up the longer the first birth

has been delayed. Using as his example a "medium-income" family with two children and the wife working part time, he calculates that to raise the children to age 18 such parents would now spend an average \$80,300 (in 1981 prices) per child if the wife is age 22 when the first child is born, \$82,800 if the wife is 27, and \$83,200 if the wife waits until she is 32.⁷³ Couples' earnings go up as they move through their twenties and thirties, so "children who are born later in their parents' lives are being reared at a time when their parents have higher earnings," Espenshade explains.

He finds that delaying the first birth increases subsequent expenditures on children more in higher income families than it does in those in the lower income brackets. In middle- and low-income families, children delayed until the wife is 32 reach their most expensive years after the father's earnings have peaked at age 44 and begun to decline. In higher income families, Espenshade calculates that husbands' earnings peak around age 49, so there is more money to spend just about the time children born when the wife is 32 and later reach their expensive years. It could also be that couples in the upper income brackets prefer to spend more of their income on their children. They may place more emphasis on education, for example, and be more likely to send their children to private schools and purchase expensive learning tools like home computers.

In his study, Espenshade includes the wife's income but not her "opportunity costs"—usually measured as the income a woman foregoes if she stays home to raise her children rather than working. Opportunity costs are difficult to measure not only because they require estimating the earnings capacity of a woman who is not working, but also because the woman is not only foregoing income but also experience. The time she takes out of the labor market may cost her more than just the immediate income she is foregoing; she may not be competitive with other workers when she returns so that she

earns less in the future than if she had never left the market place. If these things are considered, then children of higher income couples who have delayed childbearing are potentially even more costly than what Espenshade estimates. Wives in such families are likely to have had more prestigious jobs, however, so if they do decide to stop working temporarily after their children are born, they may have more flexibility in setting their hours when they return to work, which will make it easier to combine parenting and a career.

Are there any long-term economic consequences of starting childbearing at later ages? The only way to answer this question immediately is to look at delayed childbearers who are now older. They delayed childbearing during earlier decades and their experience may be different from that of today's delayers because their reasons for delay could have been quite different. With this caveat in mind, sociologist Sandra Hofferth examined the long-term economic consequences for women who delay childbearing.⁷⁴ She notes that the timing decision is confused by the number decision; in the past, at least, women who delayed childbearing tended to have smaller families than those who did not. In general, however, she found that women who were over 30 at the birth of their first child were better off economically when they reached age 60 than women who started their families sooner and also childless women.

Relations with other kin

We have seen that older parents who have delayed childbearing are less likely than younger parents to depend on grandparents or other relatives for child care. The reason could be simple distance.

Demographer Larry Long points out that although people tend to move less often as they grow older, the presence of children also inhibits moving.⁷⁵ So, of two couples in their thirties, the one that started childbearing early is less likely to

have moved than the couple that delayed childbearing. Since it is also likely that the couple which delayed childbearing married at older ages, they probably had met more people from places other than their home town or state from which to choose their mate and thus could be less likely to be living near either set of grandparents or other relatives.

If they are farther away from their relatives, what does this mean for relations between the children and their grandparents? Distance is not the only issue here; the age of the grandparents is an important point. The parents of couples who wait until their mid-thirties to begin childbearing may never get to know their grandchildren as they grow up. They could be 60 and still active when the grandchildren are born, but rarely get to see them because they live far away. Although mortality rates have declined substantially, as time goes on the grandparents may develop ailments which prevent their traveling or force them into nursing homes.

The age difference could cause another difficulty for the couple who delay childbearing: they may have to cope simultaneously with the costs of parents' nursing homes and children's college education. And with two generations of delayed childbearing in a row, couples in the middle are likely to have the double dependency of preschool-aged children and aged parents.

Delayed Childbearing and Society

The delayed childbearers of today were the baby boom babies of the 1950s and early 1960s. All their lives, their sheer numbers have made them a powerful influence on American society. Twenty and thirty years ago they needed schools, so the nation embarked on a massive school-building program. Record companies thrived and college campuses were in turmoil as they reached late adolescence in the late 1960s and early



Affluent, older, first-time parents are a prime new business market.

1970s. Women of this generation have entered the labor force in record numbers and, in a sharp break with the past, are continuing to work through their childbearing years.⁷⁶

Now newspaper and magazine articles talk of the "baby boomlet" as many of the baby boomers who put off childbearing start to have children. Because so many of these women are employed, they have triggered a move away from maternity clothes that emphasize pants and blousy tops to "three-piece gray flannel suits" suitable for the office. Levi Strauss and Co. recently introduced "snap-to-fit maternity jeans," which may reflect the popularity of jeans or mean that pregnant women are making their wishes known about what they want to buy and wear. Two factors may explain entrepreneurs' renewed interest in pregnant women: the trend to consumerism and the increased proportion of first births. The latter is important because the greatest expenses—whether for maternity clothes or baby equipment—come with the first

pregnancy. It is also possible that with the wide acceptance of small families, usually one or two children, there is more time, willingness, and financial ability to purchase special things for the baby, such as infant swimming lessons, postnatal mother-baby exercise classes, elaborate educational toys, and color-coordinated nursery equipment.

Women who delay childbearing generally have more money to spend on their children than women who start earlier. Little wonder that new businesses catering to these older, affluent, first-time, working mothers are proliferating. What will happen to them when the baby bust generation replaces the baby boomers in the childbearing ages? Some may fade away; others will diversify. But many could survive because working women, no matter at what ages they have their children, will want maternity clothes suitable for work and will still enjoy spending money on themselves and their infants.

The baby boom women's passage through the childbearing ages is also affecting the health industry. With so many of them delaying first births to older ages, the potential increase in Down syndrome and other chromosomal birth defects is great. One group of researchers projects a 64 percent increase in the number of American children born with serious chromosomal birth defects between 1978 and the year 2000.⁷⁷ That could be expensive for society. The researchers estimate that future costs of custodial care only for children born in 1978 with serious birth defects could run more than two billion dollars. Such calculations, of course, do not include the emotional costs to families and friends.

Health planners are becoming concerned with meeting the inevitably increased demand for the prenatal diagnostic techniques that can now detect many of these serious birth defects. Priorities may shift from pregnant teenagers, whose numbers are declining as the smaller cohorts of the late 1960s and 1970s pass through the teenage years, to the special health needs of older

Table 8. Projected Mean Age at First Birth and Percent Who Will Be Childless of Women Born in 1950: U.S. and Five European Countries

Country	Mean age at first birth	Percent childless
Austria	23.1	34
Belgium	25.2	4
England and Wales	24.9	21
Italy	26.0	10
West Germany	24.2	19
United States	22.9	19

Source: David E. Bloom, "Age Patterns of Women at First Birth," *Genus*, Vol. 38, No. 3/4 (1982) Table 5, pp. 122-123, and "What's Happening to the Age at First Birth in the United States? A Study of Recent Cohorts," *Demography*, Vol. 19, No. 3 (1982) Table 2, p. 360.

mothers and their infants. Researchers are developing new prenatal diagnostic tests like chorionic villi sampling. The medical profession is becoming aware that the older, first-time mother does not automatically have problems, but requires good pre- and postnatal care and careful use of modern techniques during her pregnancy.

International Comparisons

If American women's current tendency to postpone childbearing, though a sharp contrast to the baby boom era, is not unlike the behavior of their forebears earlier in this century, how does it compare with current trends in other developed countries? Data to make such a comparison are not easy to obtain because each country has its own methods of measuring, tabulating, and publishing demographic data. However, for several West European countries and the U.S., David Bloom has projected the percentage of women born in the late 1940s and early 1950s who are likely to be childless at the end of their reproductive years and the

mean age at first birth for those women who do have children. His projections for women born in 1950 are shown in Table 8.

Despite the U.S. trend toward delayed childbearing, the mean age at first birth for women born in 1950 is likely to be lower in the U.S. (22.9) than it will be in all five of the European countries shown. Further, the level of childlessness projected for this cohort of American women (19 percent) is not unusual; Bloom projects that 34 percent of their counterparts in Austria will never bear children. Of the West European countries he studied, Bloom found that only Belgium, Finland, Portugal, and West Germany had any tendency toward increasing ages at first birth among recent cohorts of women. In all these countries, however, the mean age at first birth for cohorts born up to the early 1950s is already higher than it is for the same cohorts in the U.S. The 1955 U.S. cohort, which has been delaying first births much more than American women born in 1950, is in fact still projected to have a mean age at first birth that is lower (23.08) than that for the 1950 cohorts in any of the five European countries shown in Table 8.

The Future

Will a large proportion of American women continue to defer childbearing to their late twenties and thirties? The answer depends on what is causing the current delay. If the forces that are causing it

continue, then delayed childbearing will continue. We have seen that delayed childbearing is closely related to delayed marriage and increasing levels of childlessness among women 25 to 34. All three are different manifestations of the same thing—call it the propensity to reproduce. If one subscribes to Easterlin's cyclic theory, then one might expect the proportion of women who delay childbearing to decline as the baby bust generation of the 1970s enters the labor force and economic opportunities improve for young men. On the other hand, if Easterlin's critics are correct in arguing that increased opportunities in the work place have made it too costly for women to stay home to raise children, we might see an even greater increase in the proportion of women who postpone children or forego them entirely.

We do not need a crystal ball, however, to forecast that numbers and rates of first births to women aged 25-34 will continue to be relatively high for the next decade. Even with no change in the tendency of women of these ages to bear children, the rates and numbers will remain high as the large baby boom cohort moves through these ages. Women born in what demographers label the last year of the baby boom, 1964, have just turned 20. Thus baby boom women will continue to be the major influence on U.S. fertility through the 1990s. And most of them show no signs of reverting to early-childbearing patterns. □

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Population Bulletin

Understanding U.S. Fertility:

*Findings from the National
Survey of Family Growth, Cycle III*

*By William F. Dratt, William D. Mosher,
Christine A. Bachrach, Marjorie C. Horn*

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Abstract—This *Bulletin* presents the first overview of findings from Cycle III of the National Survey of Family Growth, the latest of seven such surveys of U.S. fertility since 1955 and the first to cover all women of childbearing age in the conterminous U.S. Interviews between August 1982 and February 1983 with 7,969 women, representative of 54 million women aged 15-44, reveal that sterilization is now the leading contraceptive method in the U.S., used by 33 percent of all contraceptors in 1982 (22 percent, female sterilization; 11 percent, male sterilization), followed by the pill (29 percent), condom (12 percent), diaphragm (8 percent), and IUD (7 percent). Linked to this is the continuing decline in unwanted births since the baby boom peak in 1957, which accounted for nearly half of the drop between 1973 and 1982 in ever-married women's children ever born, from 2.2 to 1.9 per woman. However, births conceived sooner than planned increased slightly among younger married women, probably due to the large drop in pill use since 1973 and increased use of the less effective diaphragm and condom among couples still intending to have more children. Black women are now more likely than white women to use the most effective female methods: female sterilization, pill, and IUD. Only 45 percent of women aged 15-44 in 1982 had used a contraceptive method at first intercourse. Four out of five women married for the first time between 1975 and 1982 had intercourse before marriage. However, premarital sexual activity may be leveling off among white teenagers after a steep rise since the early 1970s and declining moderately among black teenagers. Sixteen percent of first marriages among ever-married women aged 15-44 in 1982 had been dissolved within five years, mostly by divorce or separation. Fifty-nine percent of black women with children in 1982 had their first birth before marriage, compared to 11 percent of white mothers. The proportion of babies who were breastfed more than doubled between 1970-71 and 1980-81, from 24 to 53 percent.

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Understanding U.S. Fertility:

Findings from the National Survey of Family Growth, Cycle III

By William F. Pratt, William D. Mosher, Christine A. Bachrach, and Marjorie C. Horn

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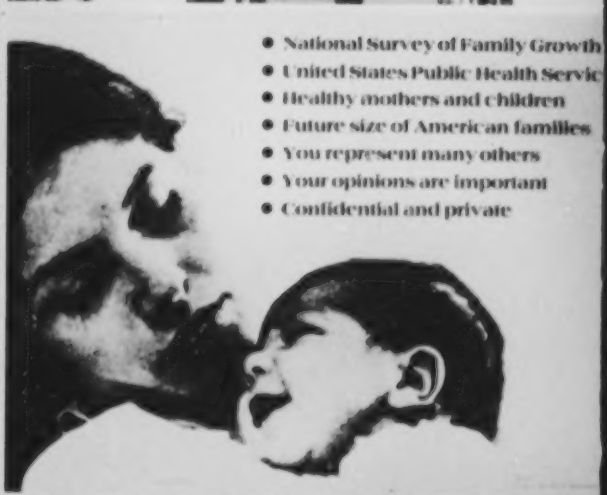
(This *Bulletin* contains 19 figures which illustrate data presented in the tables.)

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By William F. Pratt, William D. Mosher, Christine A. Bachrach, and Marjorie C. Horn

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This *Population Bulletin* presents the first overview of main findings from Cycle III of the National Survey of Family Growth (NSFG), based on interviews between August 1982 and February 1983 with almost 8,000 American women of child-bearing age. Conducted by the National

Center for Health Statistics, first in 1973 and again in 1976, the NSFG continues the series of seven national surveys begun in 1955 which have gathered information on U.S. fertility more detailed and complete than obtainable from any other source. In Cycle III of the NSFG, for the first time, the sample interviewed was representative of all women aged 15-44 in the U.S. (excluding Alaska, Hawaii, and women in institutions), regardless of whether or not they had been married or had children—a total of 54 million women in 1982. This yields a more complete and accurate picture of American women's fertility-related behavior than ever before to guide businesses, policymakers, health program planners, demographers, marriage, teenager, and family counselors, and all concerned with American women, their fertility, their babies, and the outlook for the future.

The picture of American women's fertility presented here is also more timely than ever before. Publication of the main results from NSFG's Cycle III in this *Population Bulletin* permits a much shorter time from completion of the survey field work to release of the summary findings than was possible with any of the six earlier U.S. fertility surveys. Highlights of these findings are:

- Reflecting the continuing decline in overall fertility and in unwanted births since the baby boom peak in 1957, the average number of children already born to ever-married women aged 15-44

dropped from 2.2 to 1.9 per woman between 1973 and 1982 and the proportion of these births that were wanted at conception increased from 85 to 89 percent. The average total births ever-married women expected to have by the end of their childbearing dropped from 2.8 to 2.5 per woman.

- Proportions of never-married women aged 15-19 in 1982 who had had sexual intercourse—40 percent among whites and 58 percent among blacks—indicate that premarital sexual activity is leveling off among white teenagers after a steep rise since the early 1970s and declining moderately among black teenagers.

- Nearly one-third of first marriages among ever-married women aged 15-44 in 1982 had been dissolved by divorce, separation, or death—16 percent within five years of the marriage.

- Four out of five women married for the first time between 1975 and 1982 had had intercourse before marriage.

- Only 45 percent of women aged 15-44 in 1982 had used a contraceptive method at first intercourse.

- Fifty-five percent of all women aged 15-44 were using contraception in 1982: 68 percent of currently married women, 35 percent of the never-married, and 24 percent of women aged 15-19.

- Sterilization is now the leading contraceptive method in the U.S., used by 33 percent of all contraceptors in 1982 (22 percent, female sterilization; 11 percent, male sterilization), followed by the pill (29 percent), condom (12 percent), diaphragm (8 percent), and IUD (7 percent).

- Among married contraceptors, pill use dropped from 36 percent in 1973 to 20 percent in 1982; female sterilization rose from 12 to 26 percent.

- Seventy-eight percent of black contraceptors in 1982 were using the most effective methods (pill, IUD, male or female sterilization), compared to 67 percent of white contraceptors.

- The percentage of married women aged 20-24 who were infertile (unable to conceive after a year of intercourse without contraception) rose from 4 to 11 per-

cent between 1965 and 1982.

- Twenty-four percent of American babies born in the early 1970s were breast-fed. By the early 1980s, the proportion had more than doubled to 53 percent (57 percent among whites, 25 percent among blacks, 73 percent among infants born to college-educated women).

- Between 1965 and 1973, the proportion of married women's births in the preceding five years that were unplanned dropped from 65 to 37 percent, probably because of the increased use of the pill and IUD during this period, but declined only to 29 percent by 1982.

- In 1982, 59 percent of black mothers reported having had their first birth before marriage, compared to 11 percent of white mothers.

The Background

Beginning around 1800, fertility in the U.S. dropped steadily from about seven children per woman to a little over two children per woman during the depression of the 1930s,¹ and most observers at that time expected it to inch still lower. After World War II, demographers were prepared for a brief postwar spurt in fertility, but not the protracted surge that followed. The total fertility rate, which had been 2.3 births per woman in 1940, was up to 3.1 in 1950 and kept on climbing to 3.7 in 1957.² Part of this rise was accounted for by older women making up for births deferred during the depression and the war, but some represented a shift upward in average family size. Data from the decennial census and the birth registration system could not explain why fertility had stayed so high for so long. Writing in 1959, the authors of the 1955 Growth of American Families (GAF) survey observed:

"The United States is one of the few countries in which a high postwar birth rate has continued to the present. The extent and duration of the 'baby boom' was unanticipated by most population experts. It has led to a search for new concepts and new methods to use in measuring and analyzing our fertility and